



## ABSTRACT / ZUSAMMENFASSUNG / ABREGE

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Method for determining the alcohol content of a water/alcohol solution comprises the steps of:

- effecting heating of a predetermined quantity of water/alcohol solution until it partly or completely evaporates,
- detecting the change in its temperature over time during heating and evaporation of the said quantity of solution, and,
- determining the total energy necessary to bring about partial or complete evaporation of the said quantity of solution, or the time necessary for partial or complete evaporation, or the integral of that temperature over time during partial or complete evaporation, the value of each of these quantities being indicative of the alcohol concentration by volume in the water/alcohol solution.

# EUROPEAN PATENT OFFICE

## Patent Abstracts of Japan

PUBLICATION NUMBER : 01250860  
PUBLICATION DATE : 05-10-89

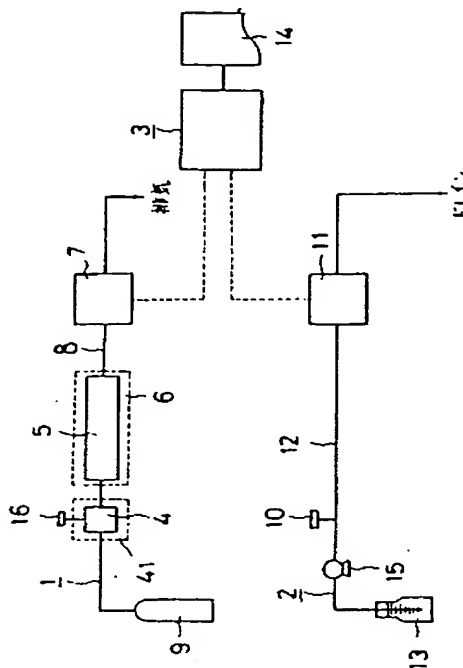
APPLICATION DATE : 31-03-88  
APPLICATION NUMBER : 63080324

APPLICANT : SHIMADZU CORP;

INVENTOR : WADA NAOKI;

INT.CL. : G01N 33/14 G01N 30/88 -

TITLE : ANALYZER SYSTEM FOR ALCOHOL DRINKS



ABSTRACT : PURPOSE: To simply and easily measure the alcohol content and extract content in alcohol drinks such as brewed 'sake' by providing a gas chromatographic analyzer system, a glucose analyzer system and an arithmetic part.

CONSTITUTION: The gas chromatographic analyzer system 1 has a gaseous helium cylinder 9, a sample evaporating chamber 4, a column 5 for sepn. of alcohols and a TCD detector 7. The glucose analyzer system 2 has a carrier liquid storage tank 13 for a glucose electrode, a cylinder 15, an alcohol drinks injection port 10 and a flow type glucose detector 11. The alcohol drinks introduced into the analyzer system 1 are evaporated at  $\geq 300^{\circ}\text{C}$  high temp. and are subjected to chromatographic sepn. Since the evaporation takes place at a high temp., the extract components in the sample are carbonized in a short period of time and the undesirable influence on the sepn. and determination of the alcohol is prevented. On the other hand, the arithmetic part 3 in which a microprocessor is used as a CPU converts the alcohol component and the extract component and moisture content in accordance with the outputs of the detectors 7, 11 and displays the same on a recorder 14.

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## Patent Abstracts of Japan

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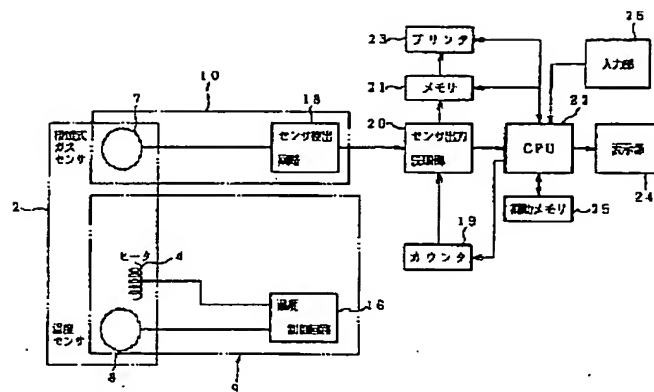
APPLICATION DATE : 17-10-96  
APPLICATION NUMBER : 08275010

APPLICANT : YAZAKI CORP;

INVENTOR : ISHIGURO YOSHIKI;

INT.CL. : G01N 27/16 G01N 33/14

TITLE : METHOD AND APPARATUS FOR  
MEASURING CONCENTRATION OF  
ALCOHOL



ABSTRACT : PROBLEM TO BE SOLVED: To measure the concentration of alcohol accurately even when a substance containing alcohol is hard to evaporate.

SOLUTION: When alcohol contained in a sample evaporates, a sensor output read part 20 reads the output of a sensor placed in a gas phase of the sample detected by a gas sensor 7 for every predetermined time. A CPU 22 compares the sensor output values of every predetermined time read by the sensor output read part 20, thereby to obtain a maximum value of the sensor output values. A counter 19 measures the time after the sensor output read part 20 starts to read the sensor output values until the sensor output value becomes the maximum value obtained by the CPU 22.

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